RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____10/535, 523 A_____

Source: _____PCT_____

Date Processed by STIC: _____09/26/2005_____

ENTERED

PCT

RAW SEQUENCE LISTING   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:39

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

```
   3 <110> APPLICANT: The Government of the United States of America
   5 <120> TITLE OF INVENTION: CELL LINES AND HOST NUCLEIC ACIDS RELATED TO INFECTIOUS
DISEASES
   7 <130> FILE REFERENCE: 6395-66741-06
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/535,523A
C--> 9 <141> CURRENT FILING DATE: 2005-05-17
   9 <150> PRIOR APPLICATION NUMBER: PCT/03/037143
  10 <151> PRIOR FILING DATE: 2003-11-18
  12 <150> PRIOR APPLICATION NUMBER: US 60/482,604
  13 <151> PRIOR FILING DATE: 2003-06-25
  15 <150> PRIOR APPLICATION NUMBER: US 60/427,464
  16 <151> PRIOR FILING DATE: 2002-11-18
  18 <160> NUMBER OF SEQ ID NOS: 845
  20 <170> SOFTWARE: PatentIn version 3.2
  22 <210> SEQ ID NO: 1
  23 <211> LENGTH: 937
  24 <212> TYPE: DNA
  25 <213> ORGANISM: Homo sapiens
  28 <220> FEATURE:
  29 <221> NAME/KEY: misc_feature
  30 <222> LOCATION: (1)..(937)
  31 <223> OTHER INFORMATION: n is a, g, c, or t
  33 <400> SEQUENCE: 1
W--> 34 gaaagccctn tccacccaag ngncggagaa ccagngngca attcnttttg ttcaatcatg   60
  36 cgaaacgatc ctyrgstacc gcttgccaaa cctacaggtg gggtctttca agaggtctcc  120
  38 agacctaggg gagcatctca gcgtcactcg ctgtccagtt gctgtgatca ggtgctttgg  180
  40 ggtttgtgtg actccagaat ccactgggcc tgtgtgtcag aagacaaaag ttaaccataa  240
  42 ggcacagaag aaagcctcct gctgaagcca tcgttggccc acatgcattt cagggacaag  300
  44 aaatgaagat cggagacttt caagttgtgc ccaggactca cctgctccca ggagacaaaa  360
  46 ggccacacag cagaggagcc tgaagcccat ggcaggatct cctagcttgg ggctggtgtc  420
  48 tctgtagtaa gcattctgaa gttcctaagc tcccttcttc ctgataggag cattgacctg  480
  50 tgatgtcacc acactgacat actttcccct gcaggccact ccagcccact gtactctttg  540
  52 gcaggcctca ggttctgcta ctccatgtac tattcctgtc ttgcacaggc cagaagctaa  600
  54 aggtgaggag gactgaacac agtaccaaca tacccacatc acaccttact ttcctctgcc  660
  56 cgccctgtcc ctgccctgac actgattccc cagcccttgc cacccccagcc ccttcacc ct  720
  58 ccactgcccg tgcagcagca gagacactcc ctccttgatg caaactgagg cctctggcac  780
  60 cccaactctt tcaaggcaat gatagtctgt gcttaactct acatggccag gcccccactc  840
  62 agggaattnc tgtgtgaaat tgttatccgc tgsacaattc cacacaacat ggnncgtcag  900
  64 accccgaaga aaagaancaa nggatctttt ggnnacc                          937
  67 <210> SEQ ID NO: 2
  68 <211> LENGTH: 1515
  69 <212> TYPE: DNA
  70 <213> ORGANISM: Homo sapiens
  73 <220> FEATURE:
```

```
      74 <221> NAME/KEY: misc_feature
      75 <222> LOCATION: (1)..(1515)
      76 <223> OTHER INFORMATION: n is a, c, g, or t
      78 <400> SEQUENCE: 2
W-->  79 cccgtgttga cgccgggcaa gngcaactcg gtcgccgcat acactattct cagaatgact    60
      81 tggttgagta ctcaccagtc acagaaaagc atcttacgga tggcatgaca gtaagagaat   120
      83 tatgcagtgc tgccataacc atgagtgata acactgcggc caacttactt ctgacaacga   180
      85 tcggaggacc gaaggagcta accgcttttt tgcacaacat gggggatcat gtaactcgcc   240
      87 ttgatcgttg ggaaccggag ctgaatgaag ccataccaaa cgacgagcgt gacaccacga   300
      89 tgcctgcagc aatggcaaca acgttgcgca aactattaac tggcgaacta cttactctag   360
      91 cttcccggca acaattaata gactggatgg aggcggataa agttgcagga ccacttctgc   420
      93 gctcggccct tccggctggc tggtttattg ctgataaatc tggagccggt gagcgtgggt   480
      95 ctcgcggtat cattgcagca ctggggccag atggtaagcc ctcccgtatc gtagttatct   540
      97 acacgacggg gagtcaggca actatggatg aacgaaatag acagatcgct gagataggtg   600
      99 cctcactgat taagcattng gkaanctgtc agaccattkt ttactgcata tacsgatcca   660
     101 ttgcccttat ctcaaactct tattatgaaa tcactnccct tgagagaraa aaagcctttt   720
     103 tctcttnngg atkgtcccag magytyccga mcatccccac tyoccaacct tatgkggccc   780
     105 agcaatgans cctagtagta ggaaaatcty tatggatacy ggkgnctgak gggaarattc   840
     107 ttcytctcat gaarwgatgg kgactggggc tytgggatgc tcacgggaat ccctatttcc   900
     109 cccacaaaga agttatttta ttacacaacc atttggatga ccccctttt cttccaattn   960
     111 nccaaataaa tctgtaaagg tcacaggtga agttcttctc tttaagagct actccatgct  1020
     113 aagttcagcg agaacttggg gtaccctaga cattcttcca gagatgcttt tcttgtaact  1080
     115 cttttcaata agtaagcatg ctttgctctg cactgggtgt cacctgtgtt ggatgctgtt  1140
     117 gtccctgcct tgccctatat tctgtccaca tggtttcttc ataggatgat gcttaggtca  1200
     119 gccctgaggt ttgaaccagt caacaagtcc aggttggtgt ggagtccctt tagtacctcc  1260
     121 ctttgcagga ataatgctgc acccagaaac tccctcagag cctctccact gggaggggcc  1320
     123 ttgtgaccat tcctggttta ctcctcttgt tccagcatcc catgtggcca atgggcccct  1380
     125 ttcattttca atggtatctc anttnttaca gtaagttata ttattgccct acatngaact  1440
     127 catctttttt cantgttacc tgnngaagaa tggnnaagga tgcccnaaan tnggcccaaa  1500
     129 anaatccact tcgnn                                                  1515
     132 <210> SEQ ID NO: 3
     133 <211> LENGTH: 885
     134 <212> TYPE: DNA
     135 <213> ORGANISM: Homo sapiens
     138 <220> FEATURE:
     139 <221> NAME/KEY: misc_feature
     140 <222> LOCATION: (1)..(885)
     141 <223> OTHER INFORMATION: n is a, g, c, or t
     143 <400> SEQUENCE: 3
W--> 144 tgtggtttnc ggtatcgccg cttccgattc gcagcgcatc gccttctatc gccttcttga    60
     146 cgagttcttc tgagcgggac tctggggttc gaaatgagct agcccttaag taacgccatt   120
     148 ttgcaaggca tggaaaaata cataactgag aatagaaaag ttcagatcga ggtcaggaac   180
     150 agatggaaca gggtcgaccg gtcgaccggt cgaccctaga gaaccatcag atgtttccag   240
     152 ggtgccccaa ggacctgaaa tgaccctgtg ccttatttga actaaccaat cagttcgctt   300
     154 ctcgcttctg ttcgcgcgct tctgctcccc gagctcaata aaagagccca caacccctca   360
     156 ctcggggcgc cagtcctccg attgactgag tcgcccgggt acccgtgtat ccaataaacc   420
     158 ctcttgcagt tgcatccgac ttgtggtctc gctgttcctt gggagggtct cctctgagtg   480
     160 attgactacc cgtcagcggg ggtctttcac tctctgtgta ctggtaccaa cagagcctgg   540
     162 accagggcct ccagttcctc attcagtatt ataatggaga agagagagca aaaggaaaca   600
```

```
164 ttcttgaacg attctccgca caacagttcc ctgacttgca ctctgaacta aacctgagct    660
166 ctctggagct gggggactca gctttgtatt tctgtgccag cagcgtaggt ggtagcttga    720
168 aacagttctt cgggccaggg acacggctca ccgtgctagg taagaagggg gctccagtgg    780
170 gagagagggt gagcagccca ncctgnncga ccccanancc tgttnttagg ggagtggnca    840
172 ctgggcatcc aggccctnct cnaggaancg ggttncgccn ggncc                    885
175 <210> SEQ ID NO: 4
176 <211> LENGTH: 900
177 <212> TYPE: DNA
178 <213> ORGANISM: Homo sapiens
181 <220> FEATURE:
182 <221> NAME/KEY: misc_feature
183 <222> LOCATION: (1)..(900)
184 <223> OTHER INFORMATION: n is a, g, c, or t
186 <400> SEQUENCE: 4
187 ttggtaactg tcagaccaag tttactcata tcggatccag ttggagccat aagtcgtcag     60
189 acatagaaaa aaatctgaaa agatatctca aaagcccaga catttattca cactaacggt    120
191 gaaaagcata ccccacagtg tcagtggagg caacatgggg tcctggattt cctcttcacc    180
193 ctcagtggta gtgaggtgtt cctctcactc cttctgagta gaggaagcca agaggaaagc    240
195 tggaacttgt accatcatcc agtggtgata aagcctctgt ccctccacct tacccccagg    300
197 ttatcagtgg caaccacatg gctagtggta cccctcccgc tcctagccag aatgatatca    360
199 gcagaggcct agagagtagc ccaaaaactc atctgcaccc agcaggactg aggtttccta    420
201 cccccaccaa tggaagccaa gtgaggaacc taagccttca cctctcactc agcaggaacc    480
203 agacaacacc ccctaacaca cacacacaca cacacacaca cacacccttc tgttagtgtg    540
205 gtatcaagga ggcttgataa aatagaagat ttaaatagga tccattgccc ttatctcaaa    600
207 ctcttattat gaaatcactc ccttgagaga gaaaaaagcc tttttctctt ggattgtccc    660
209 agcagctccc gaccatcccc actccccaac cttatgtggc cccagcaatg agcctagtag    720
```
W--> `211 taggaaaatc tctatggata ctggtgctga tgggaagatt cttcctctca ngaagtgatg    780`
```
213 gtgactgggg ctctgggatg ctcacgggaa tnccatttcc cccacaagaa nttatttat     840
215 naccaaccat ttggatgacc cctttttntt ccatttncca annaatttgt aaggncaaag    900
218 <210> SEQ ID NO: 5
219 <211> LENGTH: 869
220 <212> TYPE: DNA
221 <213> ORGANISM: Homo sapiens
224 <220> FEATURE:
225 <221> NAME/KEY: misc_feature
226 <222> LOCATION: (1)..(869)
227 <223> OTHER INFORMATION: n is a, g, c, or t
229 <400> SEQUENCE: 5
```
W--> `230 ttgggnancc ccccacaaag naagttattt tattacacaa ccatttggat gacccccttt     60`
```
232 ttcttccaat ttcccaaata aatctgtaaa ggtcacaggt gaagttcttc tctttaagag    120
234 ctactccatg ctaagttcag cgagaacttg gggtacccta gacattcttc cagagatgct    180
236 tttcttgtaa ctctttttcaa taagtaagca tgctttgctc tgcactgggt gtcacctgtg    240
238 ttggatgctg ttgtccctgc cttgccctat attctgtcca catggtttct tcataggatg    300
240 atgcttaggt cagccctgag gtttgaacca gtcaacaagt ccaggttggt gtggagtccc    360
242 tttagtacct ccctttgcag gaataatgct gcacccagaa actccctcag agcctctcca    420
244 ctggaggggc cttgtgacca ttcctggttt actcctcttg ttccagcatc ccatgtggcc    480
246 aatgggcccc tttcatttc aatggtatct caattcttac agtaagttat attattgccc    540
248 tacatcgaac tcatcttttc tcagtgttac ctgaggaaga atggagagga tgcccagaat    600
250 tggcccagaa gaatccactt cgattctaga gaaaaaggca ggtagaggca gaagagattc    660
```

RAW SEQUENCE LISTING   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:39

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

```
252 acttcccagt gcatgcgtgc tgaatgttgg gggtgttgtt tgagagagac aaggaaatgg    720
254 ctgtaaaact tgggaagagg aacctgccct gggtcaagta gggtgttggg aggaccagat    780
256 ggagcttgaa gctctctcca tctttgtcaa gtcccctgga ctgagagggn aaaatnacat    840
258 ggcctttatc ctccagagga aantnattc                                       869
261 <210> SEQ ID NO: 6
262 <211> LENGTH: 850
263 <212> TYPE: DNA
264 <213> ORGANISM: Homo sapiens
267 <220> FEATURE:
268 <221> NAME/KEY: misc_feature
269 <222> LOCATION: (1)..(850)
270 <223> OTHER INFORMATION: n is a, g, c, or t
272 <400> SEQUENCE: 6
273 tggggggttcc ggtatcgccg cttcgattcg cagcgcatcg ccttctatcg ccttcttgac    60
275 gagttcttct gagcgggact ctggggttcg aaatgagcta gcccttaagt aacgccattt   120
277 tgcaaggcat ggaaaaatac ataactgaga atagaaaagt tcagatcgag gtcaggaaca   180
279 gatggaacag ggtcgaccgg tcgaccggtc gaccctagag aaccatcaga tgtttccagg   240
281 gtgccccaag gacctgaaat gaccctgtgc cttatttgaa ctaaccaatc agttcgcttc   300
283 tcgcttctgt tcgcgcgctt ctgctccccg agctcaataa aagagcccac aacccctcac   360
285 tcggggcgcc agtcctccga ttgactgagt cgcccgggta cccgtgtatc caataaaccc   420
287 tcttgcagtt gcatccgact tgtggtctcg ctgttccttg ggagggtctc ctctgagtga   480
289 ttgactaccc gtcagcgggg gtctttcact ctctgtgtac tggtaccaac agagcctgga   540
291 ccagggcctc cagttcctca ttcagtatta taatggagaa gagagagcaa aaggaaacat   600
293 tcttgaacga ttctccgcac aacagttccc tgacttgcac tctgaactaa acctgagctc   660
295 tctggagctg ggggactcag ctttgtattt ctgtgccagc agcgtaggtg gtagcttgaa   720
297 acagttcttc gggccaggga cacggctcac cgtgctaggt aagaaggggg ctccaggtgg   780
W--> 299 **gagagagggt gagcagccca ncctgcacga ccccanaacc ctgttcttag gggagnggac**    840
301 actgggncat                                                            850
304 <210> SEQ ID NO: 7
305 <211> LENGTH: 847
306 <212> TYPE: DNA
307 <213> ORGANISM: Homo sapiens
310 <220> FEATURE:
311 <221> NAME/KEY: misc_feature
312 <222> LOCATION: (1)..(847)
313 <223> OTHER INFORMATION: n is a, g, c, or t
315 <400> SEQUENCE: 7
316 ttgggggacc gcttgccaaa cctacaggtg gggtctttca agaggtctcc agacctaggg    60
318 gagcatctca gcgtcactcg ctgtccagtt gctgtgatca ggtgctttgg ggtttgtgtg   120
320 actccagaat ccactgggcc tgtgtgtcag aagacaaaag ttaaccataa ggcacagaag   180
322 aaagcctcct gctgaagcca tcgttggccc acatgcattt cagggacaag aaatgaagat   240
324 cggagacttt caagttgtgc ccaggactca cctgctccca ggagacaaaa ggccacacag   300
326 cagaggagcc tgaagcccat ggcaggatct cctagcttgg ggctggtgtc tctgtagtaa   360
328 gcattctgaa gttcctaagc tcccttcttc ctgataggag cattgacctg tgatgtcacc   420
330 acactgacat actttcccct gcaggccact ccagcccact gtactctttg gcaggcctca   480
332 ggttctgcta ctccatgtac tattcctgtc ttgcacaggc cagaagctaa aggtgaggag   540
334 gactgaacac agtaccaaca tacccacatc acaccttact ttcctctgcc cgccctgtcc   600
336 ctgccctgac actgattccc cagcccttgc caccccagcc ccttcaccct ccactgcccg   660
338 tgcagcagca gagacactcc ctccttgatg caaactgagg cctctggcac cccaactctt   720
```

```
        RAW SEQUENCE LISTING              DATE: 09/26/2005
        PATENT APPLICATION:  US/10/535,523A   TIME: 12:50:39

        Input Set : D:\seq listing.app
        Output Set: N:\CRF4\09262005\J535523A.raw

      340 tcagggcaat gatagtctgt gcttaactct acatggccag gccccactca gggaattctc    780
W--> 342 acctagaatt tcatatncag ccaaactaag cttcataagt gaaggggaaa taaaatgctt    840
      344 tacagac                                                              847
      347 <210> SEQ ID NO: 8
      348 <211> LENGTH: 755
      349 <212> TYPE: DNA
      350 <213> ORGANISM: Homo sapiens
      353 <220> FEATURE:
      354 <221> NAME/KEY: misc_feature
      355 <222> LOCATION: (1)..(755)
      356 <223> OTHER INFORMATION: n is a, g, c, or t
      358 <400> SEQUENCE: 8
W--> 359 ttcactncaa ggatnttaca acaggacatt ttttaaaacc tcaaacatca ccaaaatttc     60
      361 taagtgcaag tttattttta tttttttttt tttttgaga cagagtctcg ctctgtcacc    120
      363 caggctagag tgcagtggca tgatcttggc tcactgcaac ctccacctcc caggttcaag    180
      365 tgattctctt gcctcagcct cccaagtagc tagtattaca gacgcctgcc accacgcccg    240
      367 gttaattttt gtacttttag tagagacagg tttcaccata ttggccaggc tggtctcaaa    300
      369 ctcctgacct caggtgatcc tcctgcctca gcctcccaaa gtgctgggat tacaggcatg    360
      371 agctaccacg tctggcctaa gtgcatgtta cctatactaa caaaaccaca cttctgcctc    420
      373 gaatgagaac agtctcctga acatcttgcc tctttgcctg actcaaagcc tcaggtctaa    480
      375 gcctccccat aatttctagt ctcagcagaa agatcaatga caggagactc tccaggtgat    540
      377 gaaattaacc aattaagtaa cctgggttgg catcctcccg tttgttcacc agctcacctn    600
      379 ctgccacagg tatatccttt ctctcancca tatatgcaca aaccccctnc ccacggnaca    660
      381 catannaana atttggaaga ctanaaaatc aggcanggtn tancncacct tgngggctgg    720
      383 agtatggnan cctgggccgg nacatncata cattg                               755
      386 <210> SEQ ID NO: 9
      387 <211> LENGTH: 839
      388 <212> TYPE: DNA
      389 <213> ORGANISM: Homo sapiens
      392 <220> FEATURE:
      393 <221> NAME/KEY: misc_feature
      394 <222> LOCATION: (1)..(839)
      395 <223> OTHER INFORMATION: n is a, g, c, or t
      397 <400> SEQUENCE: 9
W--> 398 cnntntttgn gnngnnnaag aaantncnga cntnngccnc caaatnaact tgggggggna     60
      400 accttcacta caaggatatt acaacaggac attttttaaa acctcaaaca tcaccaaaat    120
      402 ttctaagtgc aagtttattt ttattttttt tttttttttt gagacagagt ctcgctctgt    180
      404 cacccaggct agagtgcagt ggcatgatct tggctcactg caacctccac ctcccaggtt    240
      406 caagtgattc tcttgcctca gcctcccaag tagctagtat tacagacgcc tgccaccacg    300
      408 cccggttaat ttttgtactt ttagtagaga caggtttcac catattggcc aggctggtct    360
      410 caaactcctg acctcaggtg atcctcctgc ctcagcctcc caaagtgctg ggattacagg    420
      412 catgagctac cacgtctggc ctaagtgcat gttacctata ctaacaaaac cacacttctg    480
      414 cctcgaatga gaacagtctc ctgaacatct tgcctctttg cctgactcaa agcctcaggt    540
      416 ctaagcctcc ccataatttc tagtctcagc agaaagatca atgacaggag actctccagg    600
      418 tgatgaaatt aaccaattaa gtaacctggg ttggcatcct cccgtttgtt caccagctca    660
      420 cctcctgcca caggtatatc ctttctctca gccatatatg cacaaacccc ctccccacgg    720
      422 cacacataga aanaatttgg aagactagaa aatcaggcna gggnttanca caccttngag    780
      424 ggctggagta tggnanccng ggnccgggan atncatncnn tngaaaactt gactatggg     839
      427 <210> SEQ ID NO: 10
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 4,10,21,23,35,37,45,849,893,894,917,921,933,934
Seq#:2; N Pos. 22,615,625,696,727,728,789,825,960,961,1402,1405,1435,1453
Seq#:2; N Pos. 1463,1464,1474,1475,1486,1490,1492,1502,1514,1515
Seq#:3; N Pos. 9,802,806,807,816,818,825,838,858,862,868,875,880,883
Seq#:4; N Pos. 771,812,831,841,869,877,882,883,895
Seq#:5; N Pos. 6,8,21,830,836,863,865
Seq#:6; N Pos. 801,816,836,847
Seq#:7; N Pos. 797
Seq#:8; N Pos. 7,15,600,627,649,657,665,666,669,684,696,700,703,705,713,728
Seq#:8; N Pos. 730,741,746
Seq#:9; N Pos. 2,3,5,10,12,13,15,16,17,24,26,28,32,34,35,39,46,59,733,759
Seq#:9; N Pos. 764,768,777,794,796,799,803,810,813,817,819,820,822
Seq#:10; N Pos. 21,584,624,670,696,698,711,727,745,756,768,782,795,801,804
Seq#:10; N Pos. 805,811,812,827,828
Seq#:11; N Pos. 9,10,26,39,684,689,694,697,700,703
Seq#:12; N Pos. 15,26,626,645,684,704,709,716,721,722,723,731,734,746
Seq#:13; N Pos. 11,27,29,606,635,646,651,653,657,660,667,677,681,682,689
Seq#:13; N Pos. 690,692,697,698,702,710,717,719,722,729,730,731,734,736,737
Seq#:13; N Pos. 740
Seq#:14; N Pos. 11,27,40,700,706,716,745,749,761,790
Seq#:15; N Pos. 7,11,14,19,72,652,656,659,666,667,668,681,682,693,695,698
Seq#:15; N Pos. 705,713,723,726,734,736,744,745,746,749,755,762,763,767,777
Seq#:15; N Pos. 782,784
Seq#:16; N Pos. 11,570,638,642,654,664,682,689,697,704,711,714,723,742,743
Seq#:16; N Pos. 754
Seq#:17; N Pos. 2,3,22,86,695,741
Seq#:18; N Pos. 7,8,636,693,710,736,748,750,756,762,764,769
Seq#:19; N Pos. 7,9,521,568,621,629,632,637,641,648,653,659,663,672,687,695
Seq#:19; N Pos. 709,712,715,721,733,739,745,747,758,759,763,764,766,768
Seq#:20; N Pos. 6,8,733,746,752,759,760,790,803,807,821,822,823,828,830,847
Seq#:20; N Pos. 848,856,860,861,869,872,874,876,881,882,895,912
Seq#:21; N Pos. 2,7,36,723,724,778,799,817,1461,1553,1586,1597,1599,1604
Seq#:22; N Pos. 8,22,712,798,837
Seq#:23; N Pos. 8,13,14,22,44,47,54,73,76,87,117,129,1519,1534,1539,1547
Seq#:23; N Pos. 1548,1550,1558,1560
Seq#:24; N Pos. 498,503,506,652,655,656,658,794,821,834,858,1335,1368,1375
Seq#:24; N Pos. 1402,1435,1437
Seq#:25; N Pos. 8,9,15,32,680,683,700,732,736,745,754,763,764,774,787,797
Seq#:25; N Pos. 800,805,809,814,815,816,819,830
Seq#:26; N Pos. 5,740,744,746,770,778,784,785,795,802,820,827,839,842,845
Seq#:26; N Pos. 852,854
Seq#:27; N Pos. 6,7,234,235,236,797,807,822,830,839,845,864,870,873
Seq#:28; N Pos. 3,9,13,16,17,18,19,20,21,24,27,30,31,32,33,34,39,43,47,49
Seq#:28; N Pos. 50,51,54,56,57,798,806,820,833,853,855,864,865,878,880,884

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

```
Seq#:28; N Pos.  885,891,894,900,901
Seq#:29; N Pos.  2,8,9,18,23,26,35,41,50,809,813,826
Seq#:30; N Pos.  2,3,4,14,18,19,20,27,28,29,31,32,34,38,41,48,49,50,65,72,85
Seq#:30; N Pos.  90,99,771,782,789,822,827,848,858,862,872,873,879,881,884
Seq#:30; N Pos.  885,888,889
Seq#:31; N Pos.  12,21,574,604,688,691,713,715
Seq#:32; N Pos.  6,250
```

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

```
Seq#:238,239,240,241
```

VERIFICATION SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: **US/10/535,523A**   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

```
L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:34 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
M:341 Repeated in SeqNo=1
L:79 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
M:341 Repeated in SeqNo=2
L:144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:211 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:720
M:341 Repeated in SeqNo=4
L:230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
M:341 Repeated in SeqNo=5
L:299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:780
M:341 Repeated in SeqNo=6
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:780
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
M:341 Repeated in SeqNo=8
L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
M:341 Repeated in SeqNo=9
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
M:341 Repeated in SeqNo=10
L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
M:341 Repeated in SeqNo=11
L:517 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
M:341 Repeated in SeqNo=12
L:556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
M:341 Repeated in SeqNo=13
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
M:341 Repeated in SeqNo=14
L:636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
M:341 Repeated in SeqNo=15
L:677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
M:341 Repeated in SeqNo=16
L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
M:341 Repeated in SeqNo=17
L:757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
M:341 Repeated in SeqNo=18
L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
M:341 Repeated in SeqNo=19
L:835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
M:341 Repeated in SeqNo=20
L:880 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
M:341 Repeated in SeqNo=21
L:947 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
M:341 Repeated in SeqNo=22
L:990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
M:341 Repeated in SeqNo=23
L:1073 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:480
```

VERIFICATION SUMMARY   DATE: 09/26/2005
PATENT APPLICATION: US/10/535,523A   TIME: 12:50:40

Input Set : **D:\seq listing.app**
Output Set: **N:\CRF4\09262005\J535523A.raw**

M:341 Repeated in SeqNo=24
L:1120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
M:341 Repeated in SeqNo=25
L:1161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0